Barrier
metal detector

Metal Detector

SLAVUTYCH
TECHNOLOGY

Fe — Detection in all types of ores

Full access via the Internet

Mn — Detection of non-magnetic manganese steel

740 L=210 — Detection metal by size or length

Metal Detector for ores

The metal detector «Barrier» was developed for detection **manganese** steel in the flow hematite and **magnetite iron ore** with iron content **up to 70%** (and other highly mineralized or magnetic ores), it is the device for detecting tramp metal fragments in the flow of moving material even when conveyed on steel corded belts, operating in a continuous mode. The metal detector is designed to ensure trouble-free operation of crushing equipment at mining and processing industries by automatic detection of metal fragments of both magnetic and non-magnetic metals.

Detection in iron ore

Metal detector «Barrier» is effective on conveyor belts transporting hematite and magnetite iron ores with an iron content of up to **70%.**

Detection of manganese steel

Sensitivity to magnetic metal and non-magnetic manganese steel is equal, which makes it possible to detect manganese steel of smaller dimensions.

Detection on belt splice

It allows detecting foreign metal on riveted belts, even directly at the joint.

Quickly metal finding

due to its accurate indication of its position on the conveyor belt.

Quick installation

The detachable 1D204 search coil allows for quick and reliable installation of the metal detector on the conveyor.

The metal detector stops the conveyor for manual extraction (or controls the rectifier station electromagnetic separator for automatic removal) when the tramp metal is detected, shows the size and length of the detected metal and its position relative to the conveyor search coil on the local digital display and remote graphical display.

Prevents conveyor belt damage due to long rods piercing the belt at transfer points, the Metal Detector «Barrier» in this mode selectively detect only long metal objects of a given length

1 - Conveyor search coil 1D204
2 - Belt clip detector module 1C503
3 - Metal position module 1C301
4 - Conversion module 2M409F
5 - Control module 3B409E

Conversion module 2M409F

The module 2M409F performs the metal detection function, automatic adjustment when the composition of iron ore changes, sensitivity correction, calculates the size and length of the detected metal and its position on the conveyor belt.

Unlike many other Metal Detectors, in case of several fragments are detected, 2M409F displays their total size, which eliminates metal skipping when searching for it, if there are several tramp metal fragments on one section on the belt, and some of them are under the transported material.

Control module 3B409E

The 3B409E control module is a high-performance real-time system equipped with an integrated multi-touch display for maximum visualization and convenient control of the metal detector. The module supports Ethernet, RS-485, CAN, and optionally Profinet connections. It also features user access control, event logging, and real-time visualization of the metal detector's primary data.

Features

- Remote diagnostics of the metal detector
- Autocorrection of ore composition changes
- Modbus TCP / RTU networking capabilities
- Visualization and data analysis
- User access restriction
- Event log

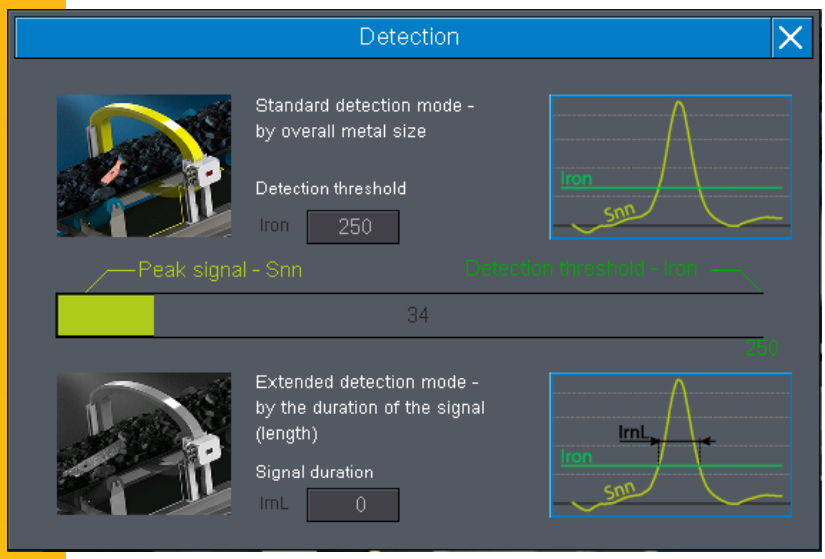
Autocorrection of settings during ore properties change

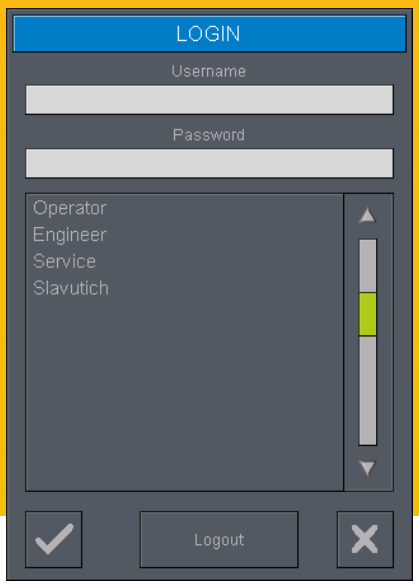
Autocorrection of the metal detector settings is performed through the operational control of the useful component content in iron ore (or other highly mineralized or magnetic ores), comparison of the obtained data, and automatic adjustment to prevent false tripping during ore composition changes.

Fine tuning

Real-time access to all parameters and variables of the metal detector allows you to make such settings without going directly to the production line during its operation:

- ore setting
- belt joint adjustment
- sensitivity setting





User access restriction

Ability to create your own policy for delimiting access to the metal detector. Operate up to 255 users with different levels of access to changing parameters or profiles of metal detectors. Each authorization in the system is registered in the Event Log.

Remote Diagnostics

Remote management via VNC, as well as full access to display and configure all metal detector parameters over Modbus TCP (Ethernet).

Data analysis

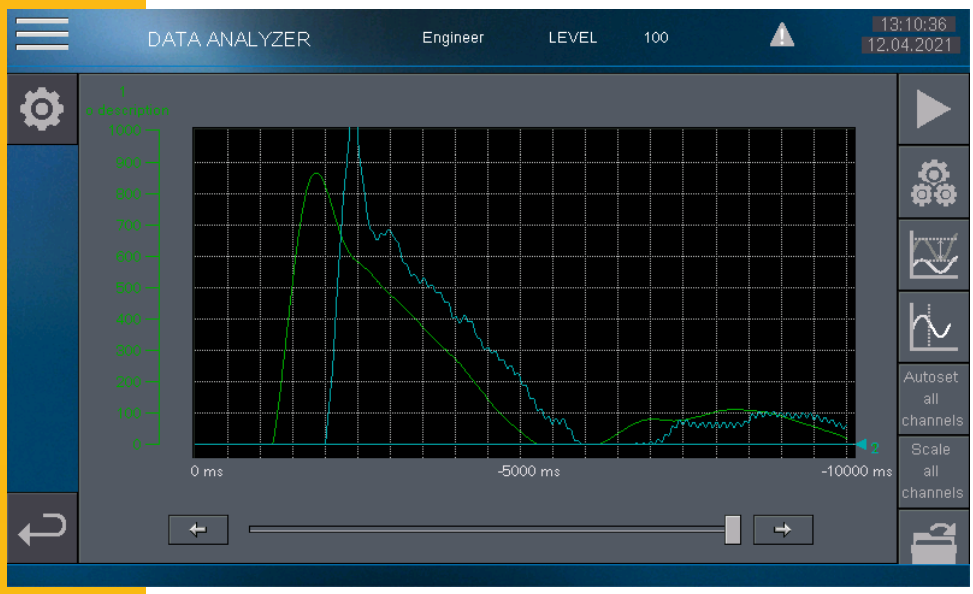
Real-time visualization of metal detector data, with the ability to display by trigger, fix and scale each channel.

Sensitivity mode

Two sensitive mode can be activated separately or together: along the length and/or over the total size of the foreign metal. Every mode has own relay output signal if they activated together.

Control of operator actions

It is carried out based on the results of analyzing the data of the event log and allows you to reliably establish the effectiveness of metal detection with the ability to save data to a USB drive.



Operation of the metal detector during welding

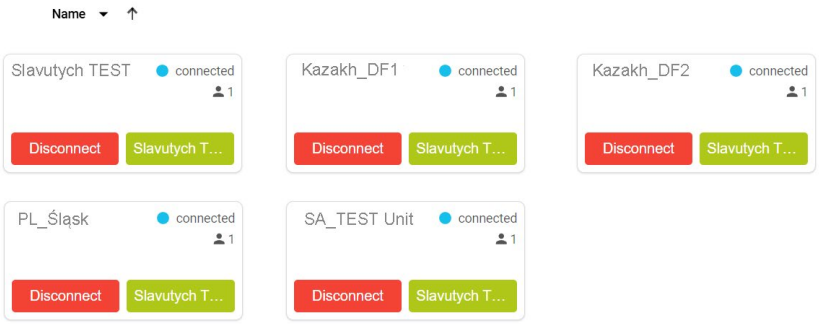
It is possible without loss of sensitivity at a distance of 2 meters from the metal detector search coil.

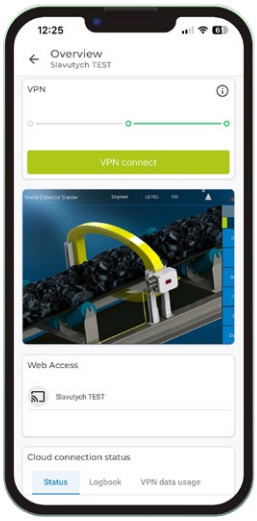
Full access to the Metal Detector via the Internet

The Barrier-409 metal detector can be connected via a secure VPN connection to the **Slavutych Remote Access** server. This allows for monitoring, diagnostics, and full control of all metal detectors at the facility from any location.

To authorize, users need to log in to their account on the server via a browser or mobile app.

In case the facility does not have network access near the installed Barrier-409 metal detector, the control module can optionally be equipped with LTE mobile internet.





VPN

We are a leading company with almost 30 years of experience in the development and production of industrial metal detectors for work with highly enriched and magnetic ores. Since 1997, we have installed almost 1000 different types of metal detectors to work with various types of ore.

Our first model of the «Barrier» metal detector was developed in September 1997 specifically for the mining and metallurgical complex to process magnetic iron ores. It was the first detector that used digital signal processing, automatic adjustment, and the ability to detect iron and manganese steel, including non-magnetic excavator teeth in a stream of iron ore, without losing sensitivity.

We continuously enhance our Barrier metal detectors, ensuring they meet the latest standards and maintain their position as the most advanced metal detector in the mining industry.

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